

Executive Summary

Introduction

Adolescent Births: A Statistical Profile, Massachusetts, 1998 is a supplement to the publication *Advance Data BIRTHS 1998*, and presents selected annual statistics and trend data on births among adolescent women in Massachusetts, as well as comparisons with national data. The four sections cover: demographic and birth characteristics and teen birth trends for the state as a whole; birth outcomes and prenatal care including birthweight, gestational age, adequacy of prenatal care, infant mortality, smoking during pregnancy, and mother's educational attainment; teen birth rates and birth characteristics for each of the 25 communities with the highest number of teen births in 1998; and teen birth characteristics for each of the 351 Massachusetts communities and for each of the 27 Community Health Network Areas (CHNAs). Teen births refer to births to resident Massachusetts women under 20 years old, unless specified otherwise. Massachusetts data are from the Registry of Vital Records and Statistics, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health (MDPH). United States data are from the Centers for Disease Control and Prevention, National Center for Health Statistics (NCHS).

Overall, Massachusetts continues to have a low birth rate among women ages 15-19 years relative to most other states and the nation as a whole.¹ However, some Massachusetts communities have teen birth rates that are higher than the national rate. Moreover, there are still disparities across race/Hispanic ethnicity subgroups in relation to low birthweight prevalence, adequacy of prenatal care and infant mortality. The data presented in this profile are intended to present information that will assist those planning programs, provide evaluators and researchers with reference measures, and assist policy makers in their efforts to address adolescent health issues.

Summary

I. Statewide Demographic and Birth Characteristics

Number and Percentage of Births to Women under Age 20

- ✓ In 1998, 5,902 infants were born to women under age 20, a decrease of 2 births from the previous year. 1997 saw the first increase in teen births in eight years.
- ✓ In 1998, 7.3% of all births in Massachusetts were to women under age 20, remaining similar to the figure of 7.4% reported in 1997. The national percentage of births that were to teen mothers dropped more noticeably in 1998 than the percentage for Massachusetts. The

¹ National Center for Health Statistics, U.S. Department of Health and Human Services, 1998.

national percentage, however, at 12.3% continues to be substantially higher than the percentage for Massachusetts (7.3%).

Birth Rates among Women Ages 15-19²

- ✓ The 1998 Massachusetts teen birth rate was 28.6 births per 1,000 women ages 15-19. The teen birth rate experienced a slight change from the previous year. Between 1990 and 1998, the teen birth rate for Massachusetts has declined 20.1%. Although the Massachusetts teen birth rate remains significantly lower than the national teen birth rate (28.6 compared to 51.1 in 1998), the national rate has dropped more steadily in recent years while the Massachusetts rate has remained relatively constant.

Age Distribution of Teen Mothers

- ✓ The age distribution of teen women giving birth has remained relatively unchanged, with age and number of births being directly related. Of women under 20, the majority of births continued to occur in the 18-19 year old range, while, as in the last seven years, approximately 40% of births (36.1% in 1998) were to women under 18.

Race/Hispanic Ethnicity Distribution of Teen Births

- ✓ In 1998, 50.0% of all teen births (<20 years of age) were to women whose race/Hispanic ethnicity was white non-Hispanic. The proportion of teen births in this category has remained relatively stable from 1993.
- ✓ Over the 5 year period from 1993 to 1998, among all teen mothers, the percentage of infants born to black non-Hispanic women has decreased from 15.2% to 12.6%, while the percentage of infants born to Hispanic women has increased from 27.4% to 30.1%.

Mother's Place of Birth

- ✓ 86.7% of all teen mothers were born within the United States or U.S. territories; among older mothers (20 years and older), there was a slightly lower percentage (75.3%).
- ✓ The percentage of mothers born outside the U.S. varied by race/Hispanic ethnicity within each maternal age group. Among teen births, the majority of black non-Hispanic mothers (85.8%) were born in the U.S., in contrast to Asian teen mothers, where the majority (80.5%) were born outside the U.S. A similar pattern was seen among older mothers.

² Due to a revised estimation of the population count for 1991-1997, the teen birth rates for these years have been re-calculated. Therefore, the 1991-1997 teen birth rates published in prior reports cannot be compared to those in this report.

- ✓ 80.6% of Hispanic teen mothers were born within the United States or U.S. territories, compared to 54.3% of older Hispanic mothers. Regardless of age, there was variation in the proportion of mothers born outside the U.S. across ethnic subgroups.

Previous Live Births

- ✓ In 1998, 16.5% of teen births were to mothers with at least one prior live birth; 2.6% of teen births were to mothers with two or more prior live births. These figures showed little change from corresponding 1997 values.
- ✓ The percentage of teen mothers who had at least one prior live birth declined from 18.0% in 1997 to 16.5% in 1998. This decline was most visible within the younger teen mother category (ages 12-17) where the percentage of multiparous mothers dropped from 10.8% in 1997 to 8.6% in 1998.
- ✓ In 1998, 31.6% of births to Hispanic women ages 18-19 and 25.0% of births to black non-Hispanic women ages 18-19 were to women who already had at least one live birth.

Prenatal Care Payment Source

- ✓ The percentage of teen mothers whose prenatal care was supported through public funds was 68.5% in 1998. In contrast, only 21.2% of women 20 and older had their prenatal care supported through public funds in 1998. The opposite trend is present in the use of HMOs as a source of prenatal care. Only 23.4% of teen mothers in 1998 relied on HMOs as a source of prenatal care compared to 63.3% of adult mothers.
- ✓ Among teen mothers, the percentage receiving publicly funded prenatal care varied by race/Hispanic ethnicity: 56.6% of white non-Hispanic teen mothers, 76.0% of black non-Hispanic teen mothers, 84.3% of Hispanic teen mothers, and 72.4% of Asian teen mothers received publicly funded prenatal care.
- ✓ In 1998, 69.3% of unmarried teen mothers and 61.3% of married teen mothers received publicly-funded prenatal care. There was little change in these percentages from 1997. The contrast was much greater among adult mothers, where 63.6% of unmarried adult mothers received publicly-funded prenatal care compared to only 10.1% of married adult mothers.

Marital Status

- ✓ In 1998, 21.0% of births to adult mothers and 90.7% of births to teen mothers were to unmarried women. Among teen mothers, marital status was largely consistent across race/Hispanic ethnicity categories.

In-Hospital Paternity Acknowledgment

- ✓ The overall percentage of births to unmarried women of all ages with paternity acknowledgment in the birth hospital increased from 50.7% in 1993 to 69.5% in 1998.

- ✓ Paternity acknowledgment occurred at a lower rate among unmarried teens than among unmarried adults. In 1998, 64.9% of births to unmarried teen mothers (ages <20) and 71.0% of births to unmarried adult mothers (ages 20+) included in-hospital paternity acknowledgment.
- ✓ Despite a decrease between 1997 and 1998 in paternity acknowledgment for infants born to unmarried teens among both young teen mothers (12-17 years old) and older teens (18-19 years old), there has been an overall increase in paternity acknowledgement for both age groups since 1993. The percentage of paternity acknowledgment for births to older unmarried teens increased from 51.6% in 1993 to 67.0% in 1998, while the corresponding percentage among younger unmarried teen women increased from 43.5% in 1993 to 61.5% in 1998.

II. Birth Outcomes and Prenatal Care

Low Birthweight and Gestational Age

- ✓ In 1998, the total proportion of low birthweight births (less than 2,500 grams) among births to teens (ages 12-19) was 8.9%, a decline of 6.3% from the prior year. The occurrence of low birthweight (LBW) among teens continued to differ across race/Hispanic ethnicity groups, with white non-Hispanic teens having the lowest percentages of LBW (7.4%).
- ✓ Overall, the percent of low birthweight births among teen births was 30.9% higher than it was for births to adult women (8.9% vs. 6.8%). This ratio varied by race/Hispanic ethnicity. Low birthweight among births to black non-Hispanic teens in 1998 was 7.5% lower than among births to black non-Hispanic adults (11.1% vs. 12.0%). Among all other race and Hispanic ethnicity groups, the low birthweight percentage was higher among teens than among adult women. Low birthweight among white non-Hispanic teens was 17.5% higher than among white non-Hispanic adult women (7.4% vs. 6.3%), while Asian teens had nearly twice as high a percentage of low birthweight births compared with adult Asian women (14.1% vs. 7.1%). However, as the number of Asian teens mothers is small, data should be interpreted with caution.
- ✓ The incidence of preterm birth (< 37 weeks gestation) continued to be higher among teen births than among births to older women (8.4% vs. 7.4%). The gap, however, between the two groups continued to close from 1.6% (1997) to 1.0% (1998), as a function of a decline in the percentage of preterm births to teens and an increase in the percentage of preterm births to older mothers.

Prenatal Care

- ✓ In 1998, very low birthweight was still marginally more common among births to teens (<20 years) than among births to older women (1.9% vs. 1.3%). Among teen births, very low

birthweight was highest among births to Asian mothers (2.7%). Since the number of births to Asian teens (<20 years old) was relatively small, this value should be interpreted with caution.

- ✓ A higher percentage of white non-Hispanic teens received adequate prenatal care (65.9%) compared with other race/Hispanic ethnicity groups. Asian teen mothers had the lowest percentage (36.2%). Similarly, 69.7% of white non-Hispanic teens began prenatal care during the first trimester compared to only 45.9% of Asian teen mothers.
- ✓ As in previous years, women under 20 were less likely than women over 20 to receive adequate prenatal care (62.0% vs. 81.2%), as well as prenatal care during the first trimester (66.4% vs. 85.7%).

Cesarean Sections

- ✓ C-Sections were less common among teen mothers than adult mothers (12.4% vs. 21.5%). The percentage for both populations rose slightly from the previous year (from 11.6% to 12.4% for teen mothers and from 20.4% to 21.5% for adult mothers).

Breastfeeding

- ✓ Breastfeeding or an intention to breastfeed, was reported by over half of the teen mothers (55.6%) compared with nearly three-quarters (72.2%) of older mothers. Both segments rose slightly from the 1997 figures as women under 20 were 8.2% more likely to breastfeed and women over 20 were 4.3% more likely to breastfeed.
- ✓ From 1993 to 1998 the total percentage of teen mothers breastfeeding or intending to breastfeed has increased 30.8% for all race/Hispanic ethnicity groups. Between 1997 and 1998, the overall rate of breastfeeding or intention to breastfeed grew from 51.4% to 55.6%. The most dramatic change occurred among black non-Hispanic teen mothers, increasing from 47.4% in 1997 to 59.9% in 1998.

Infant Mortality³

- ✓ As in previous years, the 1997 infant mortality rate (IMR) was higher among births to teen mothers compared to births to adult mothers. This difference, however, shrank considerably between 1996 and 1997, as the IMR among births to adults rose slightly from 4.7 to 4.9 deaths per 1,000 live births, while the IMR for births to teens dropped from 8.0 to 6.9.
- ✓ In 1997, the IMR was higher among births to teen mothers compared to births to adult mothers among all race/Hispanic ethnicity categories excluding Asians where no infant deaths among births to teen mothers were reported.

³ 1997 is the latest year that infant mortality data by mother's age are available. Infant mortality data that is not age-specific (i.e. infant mortality among births to mothers of *all* ages) are available for 1998. (See Technical Notes for further explanation).

- ✓ The IMR for births to black teen mothers in Massachusetts has nearly doubled since 1995 (8.1 vs. 14.8 deaths per 1,000 live births). During the same period, the IMR among births to black teen mothers nationally has remained fairly stable. However, the IMR among births to black teen mothers in Massachusetts was only slightly higher in 1997 than the national IMR for that population (14.8 vs. 14.2 deaths per 1,000 live births).
- ✓ In 1997, the infant mortality rate (IMR) in Massachusetts remained much lower than the national average among both teen and adult mothers. The IMR among Massachusetts teen births in 1997 was 33.7% lower than the IMR among U.S. teen births (6.9 vs. 10.4 deaths per 1,000 live births). Similarly, the IMR among Massachusetts adult births was 29.0% lower than the national IMR among older mothers (4.9 vs. 6.9 deaths per 1,000 live births).
- ✓ The infant mortality rate (IMR) among normal birthweight infants (2,500 grams or more) was slightly higher for teen mothers as compared to adult mothers (1.7 vs. 1.2 deaths per 1,000 live births). This difference, however, narrowed greatly between 1996 and 1997 due to a drop in the teen IMR. In 1996, the IMR among births to teen mothers was 3.1, compared to 1.7 among births to teen mothers in 1997.

Smoking during Pregnancy

- ✓ As in 1997, teen mothers reported much higher rates of smoking during pregnancy in 1998 than adult mothers (21.1% vs. 10.8%). Between 1997 and 1998, both groups displayed a decreased prevalence of smoking during pregnancy. The percentage of teen mothers who smoked during pregnancy decreased a very small amount from 21.4% to 21.1%, while the prevalence of adult women who smoked during pregnancy decreased from 11.6% in 1997 to 10.8% in 1998.
- ✓ Among teen mothers, white non-Hispanic women had the highest prevalence of smoking (31.8%), dramatically higher than their adult counterparts (11.7%). Asian teen mothers had the lowest prevalence of smoking at 7.6%.
- ✓ Overall, the fewer cigarettes mothers smoked *prior* to pregnancy, the more likely they were to quit or reduce their level of smoking *during* pregnancy. This pattern was found among both teen and adult age groups.

Expected Educational Attainment

- ✓ In 1998, 31.1% of births to teens (< 20 years of age) were to women who were behind their expected grade level at school.
- ✓ Among race/Hispanic ethnicity groups, Hispanic teen mothers were most likely to be behind their expected grade level (41.4%), followed by Asian teen mothers (28.6%) and white non-Hispanic teen mothers (28.2%).

III. Birth Characteristics for Selected Massachusetts Communities

- ✓ Statewide data can mask variation among individual communities. Each year the 25 cities and towns with the greatest number of births to teen mothers ages 15-19 are ranked by birth rate.

Community Birth Rates⁴

- ✓ *Due to a revised estimation of the population count for 1991-1997, the teen birth rates for these years have been re-calculated. Therefore, the 1991-1997 teen birth rates published in the 1996 and 1997 reports should not be compared to those found in previous reports. See Technical Notes for explanation and Appendix for new population data.*
- ✓ The five Massachusetts communities with the highest teen birth rates in 1998 were Holyoke (131.3 births per 1,000 Holyoke women ages 15-19 years), Chelsea (115.5), Lawrence (113.4), Springfield (84.1), and Southbridge (82.0). Twenty-three out of the 25 communities with the greatest number of teen births in 1998 were also among the top 27 in 1997.

Race/Hispanic Ethnicity Distribution of Births

- ✓ Among the five communities in Massachusetts with the highest teen birth rates in 1998, the highest birth rates by race/Hispanic ethnicity were to Hispanic mothers. For teens under 18, in four out of five of the communities, the highest birth rates were also to Hispanic mothers. The exception was Southbridge. The percentages of younger teen mothers (< 18 years) who were Hispanic were 87.7% in Holyoke, 81.4% in Chelsea, 83.3% in Lawrence, 61.2% in Springfield, and 64.7% in Southbridge. Statewide, the largest proportion of younger teen (< 18 years) births were to white non-Hispanic mothers (40.4%), followed by Hispanic (35.9%), black non-Hispanic (14.1%) and Asian (4.5%) mothers.

Low Birthweight (LBW)

- ✓ The five communities with the highest percentages of low birthweight for teen mothers were Southbridge (19.6%), Chelsea (15.7%), Attleboro (15.6%), Leominster (14.3%), and Lowell (12.2%). The statewide percentage of teen mothers delivering with low birthweight was 8.9% versus 6.8% for mothers over 20 years old.

Adequacy of Prenatal Care

- ✓ The five communities with the lowest percentages of adequate prenatal care for teen mothers were Methuen (40.4%), Lawrence (47.2%), Lowell (48.0%), Brockton (55.6%), and Attleboro (55.6%). Overall, the statewide percentage of teen mothers receiving adequate prenatal care was 62.0%.

Previous Live Births (Parity)

- ✓ The statewide percentage of births to teen mothers who had at least one previous live birth was 16.5%. Among the 25 communities with the greatest number of teen births, the percentages of

⁴ Due to a revised estimation of the population count for 1991-1997, the teen birth rates for these years have been re-calculated. Therefore, the 1991-1997 teen birth rates published in prior reports should not be compared to this report.

births among teens who had at least one previous live birth were highest in Methuen (29.2%), Holyoke (27.7%), Springfield (27.4%), Lawrence (24.7%), and Pittsfield (23.2%).

Expected Educational Attainment

- ✓ Among the 25 communities with the greatest number of teen births, the percentages of teen mothers who were one or more school grades behind were highest in Holyoke (40.8%), Southbridge (39.6%), Chelsea (38.0%), Fitchburg (37.1%), and Somerville (36.2%).

In-Hospital Paternity Acknowledgment

- ✓ In 1998, the state percentage of teen births for which paternity was acknowledged in-hospital was 64.9%. Brockton had the lowest percentage (50.6%). Boston (53.3%), Fitchburg (55.4%), Lynn (55.7%), and Worcester (56.1%) also had relatively low percentages of in-hospital paternity acknowledgment among the 25 selected communities.

IV. Birth Characteristics for all 351 Communities and the 27 Community Health Network Areas (CHNA)

In this section, the following statistics are presented for each of the 351 cities/towns in Massachusetts and for each of the 27 CHNAs: the number of all births, the number of teen births by mother's age (< 18 years and < 20 years), the number of births among teen mothers (< 20 years) who started prenatal care in the first trimester, and the number whose prenatal care was paid for with public funds. The Community Health Network Areas aggregate all Massachusetts cities and towns into 27 groups for the purpose of tracking health status and implementing health improvement efforts. The community groupings were modified in 1996 and the data here reflect the new groupings (see Appendix for most recent CHNA city/town groupings).

- ✓ In 1998, the Community Network Areas which had the highest rates of births to teens were Four (For) Communities (Greater Holyoke) (15.8%), The Community Health Connection (Greater Springfield Area) (14.3%), Greater Lawrence Community Health Network (13.3%), Partners for a Healthier Community (Greater Fall River Area) (13.0%), and Greater New Bedford Community Health Network (12.9%).
- ✓ In 1998, the lowest percentage of teen mothers receiving prenatal care starting in the first trimester (50.1%) was found in the Greater Lawrence Community Health Network. The Greater Lowell Community Health Network area had the next lowest percentage (57.1%), followed by Greater Brockton Community Health Network (59.0%).